USGS Prepared in cooperation with the U.S. Geological Survey

Pre-Cenozoic Sedimentary Rocks

- **Qm** — **Manmade feature**
- **Qe** — **Eolian sand and associated deposits**

Stream Deposits

- **Qsy** — **Young sidewash alluvium**
- **Qso** — **Old sidewash alluvium**
- **QTg** — **Mainstream alluvium**

Piedmont-Slope and Colluvial Deposits

- **Qp** — **Piedmont-slope deposits**
- **Qcp** — **Undivided colluvium and piedmont-slope deposits**
- **Qc** — **Colluvium**
- **Qa** — **Alluvium**
- **QTa** — **Older alluvium**
- **QTp** — **Older piedmont-slope deposits**

Basin-Fill Deposits

- **Ts** — **Post-volcanic basin-fill deposits**
- **Tmc** — **Muddy Creek Formation**
- **Trs** — **Red sandstone unit**
  - **Tsg** — Landslide and debris-flow deposits
- **Th** — **Horse Spring Formation, undivided**
  - **Thl** — Lovell Wash Member
  - **Thb** — Bitter Ridge Limestone Member
  - **Tht** — Thumb Member
    - **Thm** — Gypsiferous mudstone lithofacies
    - **Thg** — Gypsum lithofacies
    - **Thc** — Conglomerate lithofacies
    - **Thg** — Landslide blocks and megabreccia
  - **Thr** — Rainbow Gardens Member
    - **Thrc** — Conglomerate lithofacies

Intrusive and Volcanic Rocks and Associated Sedimentary Rocks

- **Tw** — **Wilson Ridge pluton**
- **Wn** — **Pendants and xenoliths**
- **Ti** — **Dikes, sills, and plugs**
  - **Tint** — Intruded sedimentary rocks
- **Tov** — **Volcanic rocks of Callville Mesa, undivided**
  - **Tovb** — Basalt
  - **Tovba** — Basaltic andesite
  - **Tovba** — Basaltic andesite
  - **Tovc** — Conglomerate
  - **Tova** — Andesite
- **Tvv** — **Volcanic rocks of Hamblin Mountain, undivided**
  - **Tvva** — Andesite breccias and flows and associated sedimentary rocks
  - **Tvva** — Andesite and dacite flows
  - **Tvva** — Andesite and dacite autoclastic breccia and debris-flow breccia
  - **Tvva** — Andesite and dacite flows and autoclastic breccias

- **Kb** — **Baseline Sandstone**
- **Ja** — **Aztec Sandstone**
  - **Jaw** — Lower sandstone unit
- **Jmm** — **Kayenta and Moenave Formations, undifferentiated**
- **Ic** — **Chinle Formation**
  - **Icu** — Upper part
  - **Ics** — Shinarump Member
- **Im** — **Moenkopi Formation**
  - **Imu** — Upper red member
  - **Ims** — Shnabkaib Member
  - **Imv** — Virgin Limestone Member
  - **Iml** — Lower red bed member
- **Pk** — **Kaibab Formation**
  - **Pkh** — Harrisburg Member
  - **Pkf** — Fossil Mountain Member
- **Pt** — **Toroweap Formation**
  - **Ptw** — Woods Ranch Member
  - **Ptb** — Brady Canyon Member
  - **Pts** — Seligman Member
- **Pr** — **Red beds**
- **IPc** — **Callville Limestone**
- **Mm** — **Monte Cristo Limestone**
- **Ꝑ** — **Crystalline basement rocks**

GEOLOGIC MAP OF THE CALLVILLE BAY QUADRANGLE, CLARK COUNTY, NEVADA AND MOHAVE COUNTY, ARIZONA

R. Ernest Anderson

2003

Contact Showing dip; dashed where approximately located.

Contact between mainly intrusive and mainly volcanic rocks; approximately located.

Approximate strike and dip of unmapped intrusive contact, mainly marks trend of unmapped dikes.

Normal fault Showing dip; bar and ball on downthrown side; arrows show relative motion; dashed where inferred or approximately located; dotted where concealed; relative motion in cross section A, away from observer, T, toward observer.

Low-angle normal fault Hachures on upper plate; dotted where concealed.

Reverse fault Teeth on upthrown side; showing dip; dashed where approximately located; dotted where concealed.

Thrust fault Teeth on upper plate; showing dip.

Structural contact of uncertain origin, either thrust fault or base of landslide Decoration on upper plate; showing dip; dashed where inferred or approximately located.

Vertical fault

Trace of base of landslide or slump block Hachures on upper plate.

Syncline Showing trace of axial plane and direction of plunge of axis; dashed where inferred or approximately located, dotted where concealed.

Anticline Showing trace of axial plane and direction of plunge of axis; dashed where inferred or approximately located, dotted where concealed.

- **Small-scale folds** Dividing line through squiggle would show approximate trace of axial plane.
- **Strike and dip of inclined bedding**
- **Strike and dip of overturned bedding**
- **Strike of vertical bedding**
- **Horizontal bedding**
- **Strike and dip of flow layering or flow foliation**
- **Vertical flow layering or flow foliation**
- **Dike** Showing dip
- **Sample locality with $^{40}Ar/^{39}Ar$ age determination** Reported by Anderson and others (1994).

See accompanying text for explanation of units, figures, references, and a description and discussion of the geologic structure of the Callville Bay Quadrangle.

Scale 1:24,000

0 0.5 1 kilometer

0 0.5 1 mile

0 1000 2000 3000 4000 5000 feet

CONTOUR INTERVAL 20 METERS
Underwater contour interval 10 meters

Base map: U.S. Geological Survey Callville Bay 7.5' Quadrangle, 1983
Universal Transverse Mercator, 1927 North American Datum

Field work performed from 1989 through 2001.

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